TITLE:

NOVEL POTASSIUM CHANNELS AND

GENES ENCODING THESE POTASSIUM CHANNELS

ABSTRACT

This invention relates to novel potassium channels and genes encoding these channels. More specifically the invention provides isolated polynucleotides encoding the KCNQ5 potassium channel subunit, cells transformed with these polynucleotides, transgenic animals comprising genetic mutations, and the use of the transformed cells and the transgenic animals for the *in vitro* and *in vivo* screening of chemical compounds affecting KCNQ5 subunit containing potassium channels.